

XXIX. *Account of the Effects of Lightning at Steeple Ashton and Holt, in the County of Wilts, on the 20th of June, 1772, contained in several Letters, communicated by Edward King, Esq; F. R. S.*

To EDWARD KING, Esq;

SIR,

Read March 18, 1773. I Have sent you, agreeably to your request, some account of a storm of thunder and lightning that happened at Steeple Ashton, in Wiltshire, on the 20th of June last. I was from home when it happened; but the truth of it is attested by the Reverend Mr. Wainhouse of Steeple Ashton, and the Reverend Mr. Pitcairn of Trowbridge, who were in my house during the tempest, and were in danger of losing their lives by it. I have added a description of the effects of the same storm upon a house at Holt, in this county. Both tend to prove in a remarkable manner the danger of placing any considerable quantity of iron in the upper part of chimnies, without a conductor to guard against the strokes of lightning. You are at liberty to lay these papers before

before the Royal Society, if you think them deserving of their attention.

I am,

SIR,

Your obedient

humble Servant,

Steeple Ashton,
Aug. 10, 1772.

L. ELIOT, Vicar of Steeple
Ashton, in Wiltshire.

ON the 20th of June, 1772, between twelve and one o'clock in the afternoon, a violent storm of thunder and lightning happened at Steeple Ashton, in Wiltshire. During the storm, a woman in the village saw a large quantity of lightning come out of a cloud, part of which is supposed to have fallen on the top of the north chimney of the vicarage house, attracted probably by an iron hoop that went round the chimney, and by some iron bars placed within it, that formerly made part of an apparatus to prevent its smoking. That the lightning fell on these iron bars is very probable, because the colour of two of them that were contiguous was changed, nine or ten inches in length, to a dark blue, like that of a watch spring, no uncommon effect of electrical fire.

In the north parlour, to which this chimney belonged, were the Reverend Mr. Wainhouse, of Steeple Ashton, and the Reverend Mr. Pitcairn, of Trowbridge, the former standing, and the latter

ter sitting in a great chair, with his back to the fire-place, near the wire of a bell. In the south parlour, separated from the other by a hall, were a maid servant and a painter ; in the kitchen another maid servant ; in the coal-house, four or five yards from the house, a man servant ; near the barn, about fifty or sixty yards from the house, another man servant. When the lightning fell upon the house, the man servant near the barn heard a very loud noise, equal, he supposes, to the sound of twenty cannons fired at once, and would have fallen to the ground, if he had not caught hold of something to support himself. The other man servant in the coal house was struck backward, and felt something, as he describes it, like a stream of warm water poured upon the middle of his body, which, if it was not the electric fluid itself, was the heated air expanding itself with violence after the explosion. The maid in the kitchen heard a great noise, but received no shock. The other maid servant, who was standing near *the middle* of the south parlour, suffered likewise no shock, being only terrified exceedingly with the explosion, and the sparks of fire, which she saw on all sides of her ; but the painter, who was in the same room, painting near the chimney and the bell wire, was struck on the left side of his body that was next the wire, from his head to his waist ; he felt in particular a severe shock, like the electrical one, in his left wrist, which was marked all round with blue and yellow intermixed ; a splinter from the wooden case, that covered the bell-wire, struck through his glove, and wounded his hand ; and he was stunned for some time.

It may be proper to observe, that immediately after the woman had seen the lightning come from the cloud, as above-mentioned, some persons in the village, besides those in or near the vicarage house, were thrown to the ground.

The following is the account, which Mr. Wainhouse and Mr. Pitcairn give of what happened in the north parlour in which they were. As they were conversing about a loud clap of thunder that had just happened, they saw on a sudden a ball of fire between them, upon a level with the face of the former, and about a foot from it. They describe it to have been of the size of a sixpenny loaf, and surrounded with a dark smoke; that it burst with an exceeding loud noise, like the firing of many cannons at once; that the room was instantly filled with the thickest smoke; and that they perceived a most disagreeable smell, resembling that of sulphur, vitriol, and other minerals in fusion; insomuch that Mr. Pitcairn thought himself in danger of suffocation. Mr. Wainhouse providentially received no hurt, except a slight scratch in his face from the broken glass that was flying about the room, a kind of stupefaction for some time, and a continued noise in his ears, which noise, the effect of the explosion, happened likewise to Mr. Pitcairn, and others in the house.

The lightning fell on Mr. Pitcairn's right shoulder, made a hole in his coat, about a quarter of an inch in diameter, went under his arm in one line to his breast, descended from thence down the lower parts of his body in two irregular lines, about half an inch broad, attracted probably by his

his watch, the glass of which it shivered into small pieces, and meeting perhaps with a little resistance from it, spread itself round his body, and produced the sensation of a cord, tied close about his waist. A violent pain in his loins immediately followed; and from thence to his extremities there seemed to be a total stoppage of circulation, all sensation being lost, and his legs and feet resembling in colour and appearance those of a person actually dead. Besides shivering the glass of his watch, the lightning melted a little of the silver of it, and a small part also of half a crown in his pocket. When it came to the middle of his thigh, it left an impression of a blackish colour, resembling the branch of a tree, which in a few days disappeared; but the lines on his body are still visible, and are of a dark blue, intermixed irregularly with a deep yellow. From the middle of his thigh the lightning changed its direction again, and went down the under side of it to the calf of his leg, and so to his shoe, which *was split into several pieces* in so remarkable a manner, as justly to claim the inspection of the curious. As soon as Mr. Pitcairn was struck, he sunk in his chair, but was not stunned; his face was blackened, and the features of it distorted. His body was burned in several places, small holes were made in different parts of his cloaths, and he lost in some measure the use of his legs for two or three days; but by proper care he soon recovered, except a weakness and numbness in his right leg, which still remains. What is remarkable, Mr. Pitcairn remembers very well to have seen the ball of fire in the room for

a short time, a second or two, *after he found himself struck with the lightning.* Extraordinary as this circumstance may appear, it may be proper to take notice, that it is entirely agreeable to an observation of the learned and ingenious Dr. Franklin, quoted below *.

The effects of the lightning on the building and furniture were as follows. The north chimney was thrown down, the roof and ceiling near it beat in; large stones were forced out of the walls, some were driven to a considerable distance, one in particular to about 200 feet. The glass of the windows in the north parlour and the chamber over it was forced outwards, except in the casements, which were open, and in which not a pane of glass was broken. The case of a clock in the same parlour fell forwards, and was beaten to pieces; a looking glass over the chimney was thrown on the floor, and broken, some of the quicksilver was melted, as was likewise some of the lead belonging to the windows. A bureau, that was locked, was opened; as was also the parlour door, inwards, probably by the external air rushing in to restore the equilibrium. Some bedding in one of the chambers was fired, but the fire was extinguished of itself, or by the rain that fell during the storm, before it was discovered. Several splinters were torn out of a hogshead full of

* In every stroke of lightning I am of opinion that the stream of the electric fluid, &c. will go considerably out of a direct course for the sake of the assistance of good conductors; and that in this course it is actually moving, though silently and imperceptibly, before the explosion, in and among the conductors, &c.

Franklin's Experiments and Observations on Electricity, edit. 4. pag. 124.

beer, but the cask was not materially damaged, nor the beer spilt. The iron bell-wire in both the parlours and the hall was reduced to smoke and entirely dissipated, excepting in those parts where it was twisted, and double, and also the wire springs contiguous to the bell, which the lightning left undamaged, as well as the brass handles and bell itself. The cieling and wall on each side, where the wire went, was stained irregularly, a foot or more in breadth, with a dark blue intermixed with a deep yellow. It is worth observing, that this iron bell wire was very small, considerably less than a common knitting needle; but though it was itself destroyed, yet it seems to have served as a conductor to the lightning, and to have prevented worse effects than happened. For when the lightning had run along, and consumed all the *single* wire, and had reached that which was twisted and double in the south parlour, contiguous to the brass handle, which the bell used to be rung with, it made a hole in the wall of five or six inches in diameter, being attracted probably by an iron stove on the other side in the kitchen chimney, where meeting with several large conductors, andirons, poker, tongs, &c. it seems to have been conveyed into the ground. This appears probable, because the progress of it below stairs could not be traced beyond this hole, which it made in the wall. In the chamber over the kitchen, a small piece of wood was indeed struck out of a bed post, and the glass of half a window was driven outwards; but this does not seem to have been the immediate effect of the lightning, but of the shake from the explosion.

Upon the whole, it must be allowed, that Mr. Wainhouse and Mr. Pitcairn had a most wonderful and providential escape, particularly the last gentleman; for had the lightning passed from his shoulder in a right line through his body, instead of going round upon the surface of it, under his arm, in order to come at his watch, by which it seems to have been attracted, immediate death would in all probability have been the consequence.

Whether Steeple Ashton is from its situation particularly exposed to thunder-storms, is uncertain. It may however be proper to mention, that in the year 1670, July the 25th, a violent storm of thunder and lightning damaged the church steeple, which was 93 feet high; and on the 15th of October in the same year, another thunder storm threw it entirely down, and killed two of the workmen, who were repairing it.

We have perused, and carefully examined the above account, and hereby testify the truth of all the facts related in it, to the best of our knowledge and belief.

August 22,
1772.

William Wainhouse.
Robert Pitcairn.

To Edward King, Esquire.

P. S.

I fear the description I left at your house of the thunder storm last June is too long ; you may shorten it as much as you think proper. I purposely omitted a few circumstances, which I thought less material. Since I was in London, I have been informed of two particulars, which I will beg leave to mention to you.

Mr. Field, a painter of Trowbridge, during the storm, observed a ball of fire vibrate forward and backward in the air over some part of Steeple Ashton, and at last dart down perpendicularly, which in all probability was the ball of fire that Mr. Wainhouse and Mr. Pitcairn saw in the north parlour of the vicarage house.

The other circumstance is as follows : After the explosion of the ball of fire in the north parlour, Mr. Pitcairn observed a great quantity of fire of *different* colours *vibrating* in the room forwards and backwards with a most extraordinary swift motion.

The vibration in both these cases observed by different persons before and after the explosion is a fact, which I should have taken notice of, had I been made acquainted with it sooner.

I am, dear Sir,

Your obliged and affectionate

humble servant,

Steeple Ashton,
near Trowbridge, Wilts,
Nov. 28, 1772.

L. Eliot.

To

To the Rev. Mr. ELIOT.

SIR,

Hearing of the damage done by lightning to your house, on the 20th of June last, I have sent you an account of what happened to mine on the same day, and nearly at the same time.

During the storm a person in this place saw a body of fire moving towards a house that is next to mine, though at some distance from it; attracted probably by a large iron bar of ten or twelve feet long, fixed horizontally to support a high chimney. This body of fire changed its direction, and fell on my house, forced a brick out of the chimney, near that part of it to which the iron bar was fastened, and went through the house to an outward door on the opposite side, which happened to be open; there it burst with a loud noise, like the firing of cannons, and filled the room where I was with smoke and the smell of sulphur. I was fortunately three or four feet out of the line in which it moved. I was however struck against the wall near which I stood; my body was covered with fire, and I thought for some time I should have been suffocated with smoke and the smell of sulphur; but by the blessing of Providence I escaped unhurt, and my house received no damage.

I respectfully am,

SIR,

Your most humble Servant,

Holt, August 22, 1772.

William Paradise.

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